APPENDIX - CLAIMS

1. (Currently Amended) A method consisting of forming an admixture consisting of:
a solvent selected from the group consisting of n-cyclohexylpyrrolidinone, dimethylenepropylene urea and N,N dimethyl propylene urea;
plasticizer additive selected from the group consisting of:
poly-co-dimethyl aminopropyl siloxane, polyglycol diacid, 3,6,9 trioxaundecanoic acid, polyethylene glycol tetrahydro furfuryl ether, glycerol triacetate and epoxidized soy bean oil; and
~~an electrically conductive conjugated polymer selected from the group consisting of substituted and unsubstituted polyparaphenylene vinylenes, polyparaphenylenes, polythianaphthenes, polyanilines, polythiophenes, polyazines, polyfurans, polypyrroles, polyselenophenes, poly-p-phenylene sulfides, polyacetylenes,~~
a precursor to an electrically conductive conjugated polymer selected from the group consisting of substituted and unsubstituted polyparaphenylene vinylenes, polyparaphenylenes, polythianaphthenes, polyanilines, polythiophenes, polyazines, polyfurans, polypyrroles, polyselenophenes, poly-p-phenylene sulfides, polyacetylenes; said precursor to said electrically conductive conjugated polymer being made electrically conductive by means of a doping reaction; said doping reaction consisting of exposing said precursor to said electrically conductive conjugated polymer to an acid-containing solution selected from the group consisting of citric acid and acrylamidopropanesulfonic acid to form an electrically conductive conjugated polymer;

said formed electrically conductive conjugated polymer being dissolved in said solvent at a concentration that allows said electrically conductive conjugated polymer to be dissolved in said solvent;
said electrically conductive conjugated polymer not being substantially soluble in said plasticizer additive in the absence of said solvent;
said plasticizer additive provides local mobility to said electrically conductive conjugated polymer to allow regions of said electrically conductive conjugated polymer to associate with one another to achieve a crystalline state; and

removing or partly removing said solvent, substantially leaving said additive therein as remaining additive, said remaining additive provides local mobility to said electrically conductive conjugated polymer to achieve said crystalline state thereby comprising a polycrystalline material;

said polycrystalline material is characterized by a degree of crystallinity regions and a degree of amorphous regions, said degree of crystallinity regions and said degree of amorphous regions are selected by selecting the composition of said additive, and the amount of said additive;

forming a film via a technique selected from the group consisting of spin-coating or solution casting from said admixture, said resulting film possessing isotropic conductivity.

2. – 19. (Canceled)

20. (Currently Amended) A method according to claim 1, wherein said plasticizer additive ~~plasticizer~~ deaggregates said polymer.

21. – 22. (Canceled)

23. (Currently Amended) A method according to claim 1, wherein said plasticizer additive is first added to a solvent and thereafter an electrically conducting polyaniline is added which becomes neutralized upon addition to said admixture.

24. – 56. (Canceled)

The balance of this page is intentionally left blank

57. (Currently Amended) A method consisting of forming an admixture consisting of:
a solvent selected from the group consisting of n-cyclohexylpyrrolidinone, dimethylenepropylene urea and N,N dimethyl propylene urea;

a plasticizer additive selected from the group consisting of:
poly-co-dimethyl aminopropyl siloxane, polyglycol diacid, 3,6,9 trioxaundecanoic acid, polyethylene glycol tetrahydro furfuryl ether, glycerol triacetate and epoxidized soy bean oil;
and
~~an electrically conductive conjugated polymer selected from the group consisting of substituted and unsubstituted polyparaphenylene vinylenes, polyparaphenylenes, polyanilines, poly p phenylene sulfides, polyacetylenes,~~

a precursor to an electrically conductive conjugated polymer selected from the group consisting of substituted and unsubstituted polythianaphthenes polythiophenes, polyazines, polyfurans, polypyrroles, polyselenophenes,

said precursor to said electrically conductive conjugated polymer being made electrically conductive by means of a doping reaction; said doping reaction consisting of exposing said precursor to said electrically conductive conjugated polymer to an acid-containing solution selected from the group consisting of citric acid and acrylamidopropanesulfonic acid to form an electrically conductive conjugated polymer;

said formed electrically conductive conjugated polymer being dissolved in said solvent at a concentration that allows said electrically conductive conjugated polymer to be dissolved in said solvent;

said electrically conductive conjugated polymer not being substantially soluble in said plasticizer additive in the absence of said solvent;

said plasticizer additive provides local mobility to said electrically conductive conjugated polymer to allow regions of said electrically conductive conjugated polymer to associate with one another to achieve a crystalline state; and

removing or partly removing said solvent, substantially leaving said additive therein as remaining additive, said remaining additive provides local mobility to said electrically conductive conjugated polymer to achieve said crystalline state thereby comprising a polycrystalline material;

said polycrystalline material is characterized by a degree of crystallinity regions and a degree of amorphous regions, said degree of crystallinity regions and said degree of amorphous regions are selected by selecting the composition of said additive, and the amount of said additive;

forming a film via a technique selected from the group consisting of spin-coating or solution casting from said admixture, said resulting film possessing isotropic conductivity.